

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-004432**Date Inspected:** 14-Oct-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Wei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

**OBG Bay 1:**

The QA Inspector randomly observed 6 ZPMC welders utilizing the Submerged Arc Welding (SAW) in the 2G/2F on Gantry 1 with ZPMC Weld Procedure Specification (WPS) WPS-B-T-2342-U1(U-Rib)-4 to weld U\_Ribs to Deck Plate DP393-001-5 Rib panel – on WJ's 001/002, 005/006 and 009/010. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Sun Wei, monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

**OBG Bay 2:**

The QA Inspector observed no work being performed for this contract in Bay 2.

**OBG Bay 4:**

The QA Inspector randomly observed ZPMC welder Li Shuqiang ID 053609, utilizing the Flux Cored Arc Welding (FCAW) in the 3G Position with ZPMC WPS WPS-B-T-2233-B-U3-F to weld the butt splice between piece marks p1103/p1246 on 62M (S) Single Tower Diaphragm SSD1-SA360 Flange Plate Assembly. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Wu Ming Kai, monitoring weld

---

## WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

---

parameters. The QA Inspector also monitored weld parameters and recorded them as follows: 242 amps, 26.7 volts with a travel speed of 117 millimeters (mm) per minute. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Li Xuehua ID 058147, utilizing the Flux Cored Arc Welding (FCAW) in the 3G Position with ZPMC WPS WPS-B-T-2233-B-U3-F to weld the butt splice at WJ 16B between piece marks SA408/p1507 on 59M (S) Single Tower Diaphragm ESD1-SA409 Flange Plate Assembly. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Wu Ming Kai, monitoring weld parameters. The QA Inspector also monitored weld parameters and recorded them as follows: 210 amps, 25.5 volts with a travel speed of 115 mm per minute. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Li Mengian ID 054460, utilizing the FCAW in the 3G Position with ZPMC WPS WPS-B-T-2233-B-U3-F to weld the butt splice at WJ 9A between piece marks SA408/p1507 on 62M (S) Single Tower Diaphragm ESD1-SA411 Flange Plate Assembly. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Wu Ming Kai, monitoring weld parameters. The QA Inspector also monitored weld parameters and recorded them as follows: 215 amps, 25.6 volts with a travel speed of 115 mm per minute. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Li Xuehua ID 058147, utilizing the Flux Cored Arc Welding (FCAW) in the 3G Position with ZPMC WPS WPS-B-T-2233-B-U3-F to weld the butt splice at WJ 16B between piece marks SA408/p1507 on 59M (S) Single Tower Diaphragm ESD1-SA409 Flange Plate Assembly. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Wu Ming Kai, monitoring weld parameters. The QA Inspector also monitored weld parameters and recorded them as follows: 242 amps, 26.7 volts with a travel speed of 117 millimeters (mm) per minute. Weld parameters appeared to comply with contract requirements.

The QA Inspector performed a 10% random final Magnetic Particle Testing (MT) verification on Side Plates SP155-001 (SP155A Yellow Tag 001010/Green Tag 001041), SP314-001 (SP314A Yellow Tag 001016/Green Tag 001040) and SP341-001 (SP341A Green Tag 001042). There appeared to be no indications. Green Tag documentation signed and dated by ZPMC Representative Tao Lei, ABF Representative Hu Gui Hua and CT QA Representative Lot number B75.

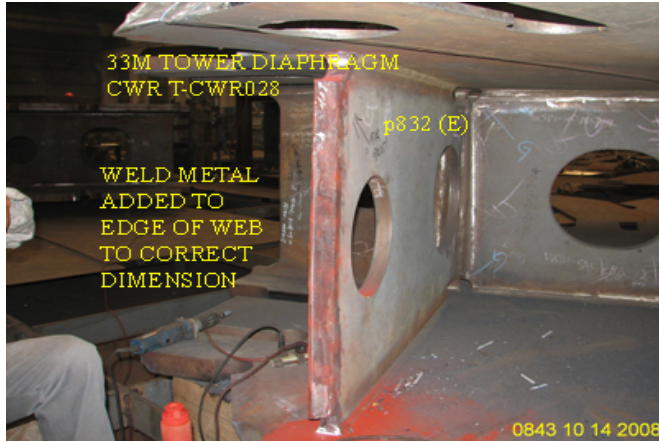
The QA Inspector performed a 10% MT verification on a weld repair per ZPMC Critical Weld Repair Number T-CWR026 to the beveled edge of Web Plate p832 on 33M (W) Tower Diaphragm. There appeared to be no indications. The attached photograph provides additional detail.

---

## WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

---



### Summary of Conversations:

There were no relevant conversations.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Josh Ishibashi 13764716411, who represents the Office of Structural Materials for your project.

---

**Inspected By:** Franco,Charlie

Quality Assurance Inspector

---

**Reviewed By:** Wright,Mark

QA Reviewer